

REMARKS

This Amendment is responsive to the Office Action mailed September 9, 2004. Following entry of this Amendment, claims 1-10, 18-27, 37, 39, and 41 are pending in this application. Applicants respectfully request reconsideration of this application.

Claim Amendments

With this response, Applicants have amended independent claims 1, 18 and 41 and dependent claims 3, 6, 20, and 23 to clarify that the contact rollers bring a portion of the donor sheet into substantially coextensive contact along the width of the acceptor element. Support for this amendment can be found in Figs. 14-17. These figures illustrate a donor sheet with the same width as the acceptor element allowing for substantially coextensive contact between the donor sheet and the acceptor element along the width of the acceptor element.

Claims 1 and 18 have also been amended to state that the donor sheet is adapted to move uni-directionally perpendicular to a longitudinal axis of the drum. Support for this amendment can be found in Figs. 15-17. In these figures, arrows illustrate that the donor sheet moves in a direction that is perpendicular to a longitudinal axis of the drum. The donor sheet does not move parallel to the longitudinal axis of the drum or along the width of the acceptor element. Furthermore, there is no need for the donor sheet to move across the width of the acceptor element because the donor sheet is substantially the same width as the acceptor element. There is only a need for the donor sheet to move perpendicular to a longitudinal axis of the drum with the corresponding rotation of the dispensing roller, receiving roller and drum. Applicants therefore respectfully submit that one of skill in the art would appreciate from Figs. 15-17 that the donor sheet moves uni-directionally perpendicular to a longitudinal axis of the drum.

Claims 18 and 41 have also been amended to state that the contact rollers are stationary with respect to a longitudinal axis of the drum. Support for this amendment can be found in Figs. 14, 16-17. The contact rollers do not move along the longitudinal axis of the drum or the width of the acceptor element. Additionally, since the donor sheet does not move

10/071,528
Page 11

along the longitudinal axis of the drum or the width of the acceptor element, as described above, there is no need for the contact rollers to move along the longitudinal axis of the drum or the width of the acceptor element. Applicants therefore respectfully submit that one of skill in the art would appreciate from Figs. 14, 16-17 that the contact rollers are stationary with respect to a longitudinal axis of the drum.

Claims 10 and 27 have been amended to improve the readability of claims 10 and 27. Finally, the word "includes" was inadvertently omitted in claim 37 in the response filed on June 14, 2004. The word "includes" has been re-inserted in claim 37 by this response.

Rejection Under 35 U.S.C. 102

Claims 1-6, 9-10, 18-23, 26-27, 37 and 41 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,222,567 to Schuster et al. Applicants respectfully submit that Schuster et al. does not anticipate the present invention as suggested by the Examiner. Specifically Schuster et al. does not report a laser-induced thermal transfer printer in which contact rollers bring a portion of the donor sheet into substantially coextensive contact along the width of the acceptor element. Additionally, Schuster et al. does not report a donor sheet that moves uni-directionally perpendicular to a longitudinal axis of the drum or contact rollers that are stationary with respect to a longitudinal axis of the drum.

The claimed invention generally includes a laser imaging head, a cylindrical drum onto which an acceptor element is affixed, a dispensing roller, a receiving roller, a donor sheet, and a plurality of contact rollers configured to bring the donor sheet into substantially coextensive contact along the width of the acceptor element. One important benefit to this arrangement is that the area of substantially coextensive contact between the donor sheet and the acceptor element is at least as wide as the width of the area on which the laser beam impinges. Therefore, the acceptor element may be completely imaged after only a single revolution of the cylindrical drum.

In contrast to the claimed invention, Schuster et al. provides a method of producing a thermal transfer print on a substrate cylinder using a transfer film or tape that is significantly narrower than the width of the acceptor sheet (See Fig. 2 of Schuster et al.). Therefore,

10/071,528
Page 12

Schuster et al. does not report or suggest a system in which the donor sheet substantially coextensively contacts the entire width of the acceptor element.

Schuster et al. also reports a transfer tape guide mechanism which leads the transfer tape into contact with a substrate cylinder (See Col. 3, lines 49-63 of Schuster et al.). As acknowledged by the Examiner on pages 10-11 of the Office Action, the transfer tape guide mechanism of Schuster et al. is jointly arranged on a traversing unit so that the transfer tape can be moved along the substrate width by the movement of the traversing unit. Schuster et al. therefore fails to report or suggest a system in which a donor sheet moves only in a direction that is perpendicular to a longitudinal axis of the drum.

The transfer tape guide mechanism of Schuster et al. also includes two contact rolls (See Col. 3, line 55 of Schuster et al.). During imaging, these contact rolls bring the transfer tape into contact with the surface of the substrate cylinder (See Col. 3, lines 65-67 of Schuster et al.) as it moves along the width of the substrate cylinder. With this configuration, the contact rolls of Schuster et al. also move along the longitudinal axis of the substrate cylinder with the transfer tape. Schuster et al. therefore fails to report or suggest a system in which the contact rollers are stationary with respect to a longitudinal axis of the drum.

For at least these reasons, Schuster et al. does not report or suggest the laser-induced thermal transfer printer, and method of providing such a printer, of the present invention. Claims 2-6, 9-10, 19-23, 26-27, and 37 depend on independent claims 1, 18 and 41 and are patentable for at least the same reasons as independent claims 1, 18 and 41.

In view of these arguments, Applicants respectfully request withdrawal of this rejection.

Rejection Under 35 U.S.C. 103(a)

The Examiner's rejection of claims 7, 8, 24, and 25 is somewhat ambiguous. Nonetheless, for the following reasons Applicants believe that the Examiner intended to reject claims 7, 8, 24, and 25 under 35 U.S.C. § 103(a) as being unpatentable over Schuster et al. in view of Patel et al. First, the Examiner states on page 7 of the Office Action that claims 7, 8, 24, and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Schuster et al. in view of Zwijssen as applied to claims 1, 18 and 29 respectively above, and

10/071,528
Page 13

further in view of Patel et al. However, Claims 1, 18 and 29 were not rejected under Schuster et al. in view of Zwijsen in the present Office Action. Claims 1, 18 and 29 were rejected under Schuster et al. in view of Zwijsen in the previous Office Action dated April 28, 2004. Second, on page 8 of the Office Action the Examiner states that it would have been obvious to utilize a donor sheet taught by Patel et al. in Schuster et al., not Schuster et al. in view of Zwijsen. For these reasons, Applicants assume that claims 7, 8, 24 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Schuster et al. in view of U.S. Patent No. 6,291,143 to Patel et al.

The Examiner states that Patel et al. includes a photothermal converter and that it would have been obvious to utilize a donor sheet taught by Patel et al. in the system described in Schuster et al. As described above, Schuster et al. does not report or suggest a thermal imaging system in which the donor sheet is brought into substantially coextensive contact along the width of the acceptor element. Furthermore, Patel et al. does not report or suggest these claimed features. Since the combination of Patel et al. and Schuster et al. fail to teach every feature of the present invention, the claimed invention is not rendered unpatentable by Schuster et al. in view of Patel et al. Applicants therefore respectfully request withdrawal of this rejection.

Even if the Examiner intended to reject claims 7, 8, 24, and 25 under Schuster et al. in view of Patel et al. and Zwijsen, Independent claims 1, 18 and 41 recite a laser-induced thermal transfer printer that includes a laser imaging head which is adapted to move relative to the donor sheet and acceptor element. However, none of Schuster et al., Zwijsen or Patel et al. report a laser imaging head that moves relative to a donor sheet and acceptor element. As previously described, Schuster et al. reports a laser writing head and a transfer tape guide mechanism that are jointly arranged on a traversing unit so that the transfer tape can be moved along the substrate cylinder width by the movement of the traversing unit. In this configuration, the movement of the laser writing head is not relative to the transfer tape because the transfer tape move with the laser writing head along the substrate cylinder width. Zwijsen reports a stationary print head and means for moving the dye donor element and receiver along respective paths so as to move the dye donor element and the receiver relative to the print head. In this configuration, the print head does not move relative to the dye donor

10/071,528
Page 14

element and in fact also appears to contact the dye donor element, unlike the claimed invention. Therefore, even if the Examiner intended to reject claims 7, 8, 24, and 25 under 35 U.S.C. § 103(a) as being unpatentable over Schuster et al. in view of Zwijsen and Patel et al., the combination of Schuster et al., Zwijsen and Patel et al. fail to teach every feature of the present invention. Applicants therefore respectfully request withdrawal of this rejection.


CONCLUSION

The pending claims are in condition for allowance. Applicants respectfully request a notice to that effect. If there are any remaining questions, the Examiner is requested to contact the undersigned at the number listed below.

Respectfully Submitted,

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